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EXAMINER	
DILEVSKI, BORCE	

ART UNIT	PAPER NUMBER
4144	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,630	FRIEDMAN ET AL.	
	Examiner	Art Unit	
	BORCE DILEVSKI	4144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 February 2006_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-31_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-31_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 May 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _December 6, 2005 and October 29, 2008_.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

1. Claims 1-31 have been examined and are pending.

Information Disclosure Statement

2. Initialed and dated copies of applicants IDS forms submitted on 12/6/2005 and 10/29/2008 are attached to the instant office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-7, 9-11, 14-27, 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,130,890 to Leinwand et al.

As per claims 1, Leinwand et al teaches a method for routing network traffic, comprising:

receiving the network traffic (Col. 3, Lines 9-11, A method for determining a route for a packet (network traffic) traveling from a source to a destination)**;**

determining a destination for the network traffic (Col. 3 Lines 11-13, A second geographic area (destination) of the route corresponds to the destination)**;**

obtaining geographic information on one of a source or the destination associated with the network traffic from a map of the network, the map being produced as a result of: determining a route through the network which includes one of the destination or source (Col. 3 Lines 9-13, Determining a route for a packet from a source to a destination)**;**

deriving a geographic location of any intermediate hosts contained within the route through the network (Col. 2 Lines 14-19 and Col. 3 Lines 29-44, Autonomous systems (intermediate hosts) of the internet tell each other how to find every IP address range in the internet where the autonomous systems have a geographic location)**;**

analyzing the route and the geographic locations of any intermediate hosts (Col. 7 Lines 5-22, The routers of the autonomous systems make decisions (analyze) about which autonomous system the packet that is traveling will go to next)**;**

determining the geographic location of the source or destination (Col. 3 Liens 11-13, The source and destination each have their own geographic location)**; and**

storing the geographic location in the map (Col. 15 Lines 19-34, The mapping of an autonomous system is done according to it's location)**; and**

directing the network traffic to a desired destination based on the geographic location of the source or destination (Col. 3 Lines 9-34, A packet

(network traffic) is routed to it’s destination based on it’s source or destination).

As per claim 4, Leinwand et al teaches the method as set forth in claim 1, wherein receiving the network traffic comprises receiving a request at a host server (Col. 2 Lines 14-20, Autonomous systems route traffic in a range of IP addresses and tell (request) the internet to send packets destined to be in their range of IP addresses right to them (autonomous system)).

As per claim 5, Leinwand et al discloses the method as set forth in claim 1, wherein the network traffic comprises a request, the desired destination comprises a desired server, and wherein directing the network traffic comprises directing the request to the desired server based on the geographic location (Col. 2 Lines 39-50, A method is disclosed where a destination is being linked to a geographic region and the traffic being directed to it based on it’s location).

As per claim 6, Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic to the desired destination comprises selecting a route with a shortest distance to the desired destination (Col. 7 Lines 44-52, The route with the fewest autonomous systems also known as the shortest path is chosen for the data packet’s (network traffic)

route).

As per claims 7, Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic to the desired destination comprises selecting a route to the desired destination having the shortest latency time (Col. 9 Lines 22-39, A selection of the route for a data packet is chosen to reduce delays in transmission (latency time)).

As per claims 9, Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic to the desired destination comprises selecting the desired destination based on its load (Col. 11 Lines 5-24, When a data packet travels through the network a path with reduced congestion (load) is chosen).

As per claim 10, Leinwand et al teaches the method as set forth in claim 1, wherein the geographic location comprises the geographic location of the source and directing the network traffic to the desired destination comprises selecting the desired destination because it has content associated with the geographic location (Col. 11 Lines 39-50, A method is disclosed where a phone call is being routed to a geographic region in which the physical destination of the call is located).

As per claims 11, Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic to the desired destination comprises selecting the desired destination based on a connection speed associated with the source (Col. 11 Lines 5-24, A route (destination) for a data packet is chosen with the least transit time (connection speed))**.**

As per claim 14, Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic comprises selecting a route based on interconnection speeds within the network (Col. 11 Lines 5-24, A route (destination) for a data packet is chosen with the least transit time (connection speed) between nodes for total least transit time)**.**

As per claim 15, Leinwand et al teaches the method as set forth in claim 1, further comprising analyzing the network (Col. 7 Lines 5-25, Routers in the autonomous systems make decisions (analyze the network) to decide on which route a data packet will take)**.**

As per claim 16, Leinwand et al discloses the method as set forth in claim 15, wherein analyzing comprises analyzing interconnections between nodes in the network (Col. 7 Lines 5-25, Each router in every interconnected autonomous system (nodes) makes decisions (analyze) about which route to

send each data packet).

As per claim 17, Leinwand et al teaches the method as set forth in claim 15, wherein analyzing comprises analyzing nodes within the network (Col. 7 Lines 5-25, Each router (node) of an autonomous system makes a decision once it receives the data).

As per claim 18, Leinwand et al teaches the method as set forth in claim 15, wherein analyzing comprises modeling behavior of the network (Col. 7 Lines 5-25, The router in each autonomous system chooses routes for the data packets).

As per claim 19, Leinwand et al teaches the method as set forth in claim 18, wherein modeling comprises approximating the behavior at nodes (Col. 7 Lines 5-25, The autonomous systems receive reachability information in order to determine routes).

As per claim 20, Leinwand et al teaches the method as set forth in claim 18, wherein modeling comprises simplifying the map of the network by combining nodes in traffic routes (Col. 1 Lines 39-50 and Col. 2 Lines 21-32, Calls are routed to a geographic location where the router acts as a node for data

to access multiple routes).

As per claim 21, Leinwand et al teaches the method as set forth in claim 1, wherein obtaining the geographic information comprises generating the map of the network (Col. 15 Lines 19-34, A geographic are is associated (generating the map) with the designation of an autonomous system).

As per claim 22, Leinwand et al teaches the method as set forth in claim 1, wherein obtaining the geographic information comprises querying a system for the geographic information and receiving a response from the system with the geographic information (Col. 3 Lines 9-44, A method is described obtaining (querying and receiving) information relating to an autonomous system where the information includes geographic information).

As per claim 23, Leinwand et al teaches the method as set forth in claim 1, wherein the network comprises the Internet and the network traffic comprises packets (Col. 4 Lines 36-38, a method is described where network traffic comprised of packets is routed over the internet).

As per claim 24, Leinwand et al teaches a method for routing network traffic, comprising:

receiving the network traffic (Col. 3, Lines 9-11, A method for determining a route for a packet (network traffic) traveling from a source to a destination)**;**

determining a destination for the network traffic (Col. 3 Lines 11-13, A second geographic area (destination) of the route corresponds to the destination)**;**

obtaining intelligence on the network from a map of the network, the map being produced as a result of: determining at least one route through the network which includes the destination (Col. 3 Lines 9-13, Determining a route for a packet from a source to a destination)**;**

identifying any intermediate hosts contained within the route between a source of the network traffic and the destination (Col. 2 Lines 14-19 and Col. 3 Lines 29-44, Autonomous systems (intermediate hosts) of the internet tell each other how to find every IP address range in the internet where the autonomous systems have a geographic location somewhere between the source and destination)**;**

analyzing interconnections between nodes in the network (Col. 7 Lines 5-22, The routers of the autonomous systems make decisions (analyze) about which autonomous system the packet that is traveling will go to next)**; and**

storing results of the analyzing in the map (Col. 15 Lines 19-34, The mapping of an autonomous system is done according to it's location)**; and**

directing the network traffic to a desired destination based on the intelligence on the network stored in the map (Col. 3 Lines 9-34, A packet

(network traffic) is routed to it's destination based on it's source or destination (intelligence)).

As per claim 25, Leinwand et al teaches the method as set forth in claim 24, wherein the intelligence includes a geographic location of the destination (Col. 3 Liens 11-13, The source and destination each have their own geographic location).

As per claim 26, Leinwand et al teaches the method as set forth in claim 24, wherein intelligence includes a geographic location of the source (Col. 3 Liens 11-13, The source and destination each have their own geographic location).

As per claim 27, Leinwand et al teaches the method as set forth in claim 24 wherein intelligence includes a connection speed associated with the source (Col. 11 Lines 5-24, A route (destination) for a data packet is chosen with the least transit time (connection speed)).

As per claim 30, Leinwand et al teaches the method as set forth in claim 24 wherein the intelligence includes a latency time associated with the destination (Col. 9 Lines 22-39, A selection of the route for a data packet is chosen to reduce delays in transmission (latency time)).

As per claim 31, Leinwand et al teaches the method as set forth in claim 24, wherein the intelligence includes information on loads at different destinations (Col. 11 Lines 5-24, When a data packet travels through the network a path with reduced congestion (load) is chosen)**.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,130,890 to Leinwand et al and further in view of US Patent 6,324,585 to Zhang et al.

As per claim 2, while Leinwand et al teaches the method as set forth in claim 1, Leinwand et al does not teach but Zhang et al teaches wherein

receiving the network traffic comprises receiving a domain name service inquiry (Zhang et al, Col. 2 Lines 66-67, A method is described using a domain name service inquiry (request))

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the domain name service inquiry of Zhang et al because a domain name service inquiry enables the central managing of host names to IP addresses.

As per claim 3, while leinwand et al teaches the method as set forth in claim 1, Leinwand et al does not teach but Zhang et al teaches wherein

the network traffic comprises a domain name service inquiry and wherein (Zhang et al, Col. 2 Lines 66-67, A method is described using a domain name service inquiry (request))

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the domain name service inquiry of Zhang et al because a domain name service inquiry enables the central managing of host names to IP addresses

directing the network traffic comprises resolving the domain service inquiry by selecting the desired destination based on the geographic location from a plurality of destinations (Zhang et al, Col. 3 Lines 1-19, a

method is described using a domain name service inquiry where it is possible for the user to connect to more than one network at a time)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the domain name service inquiry of Zhang et al because a domain name service inquiry enables the central managing of host names to IP addresses**.**

5. Claims 8, 12-13, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,130,890 to Leinwand et al and further in view of US Patent 5,231,631 to Buhrke et al.

As per claim 8, while Leinwand et al teaches the method as set forth in claim 1, Leinwand et al does not teach but Buhrke et al teaches wherein

directing the network traffic to the desired destination comprises selecting a route having the most available bandwidth (Buhrke et al, Col. 1 Lines 65-67 and Col. 2 Lines 1-66, A method is disclosed where a route is chosen based upon the most available bandwidth)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the selection method to select a route of traffic based on bandwidth of Buhrke et al because decisions based on bandwidth help avoid congestion in data traffic**.**

As per claims 12, while Leinwand et al teaches the method as set forth in claim 1, Leinwand et al does not teach but Buhrke et al teaches wherein

directing the network traffic to the desired destination comprises selecting the desired destination bandwidth available at the desired destination (Buhrke et al, Buhrke et al, Col. 1 Lines 65-67 and Col. 2 Lines 1-66, A method is disclosed where a route is chosen based on the bandwidth available at the destination)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the selection method to select a route of traffic based on bandwidth of Buhrke et al because decisions based on bandwidth help avoid congestion in data traffic.

As per claims 13, while Leinwand et al teaches the method as set forth in claim 1, wherein directing the network traffic to the desired destination comprises

selecting the desired destination based on a connection speed associated with the source (Leinwand et al, Col. 11 Lines 5-24, A route (destination) for a data packet is chosen with the least transit time (connection speed)) **and**

Leinwand et al does not teach but Buhrke et al teaches bandwidth available at the desired destination (Buhrke et al, Col. 1 Lines 65-67 and Col.

2 Lines 1-66, A method is disclosed where a route is chosen based on the bandwidth available at the destination)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the selection method to select a route of traffic based on bandwidth of Buhrke et al because decisions based on bandwidth help avoid congestion in data traffic.

As per claim 28, while leinwand et al teaches the method as set forth in claim 24 Leinwand et al does not teach but Buhrke et al teaches wherein intelligence includes bandwidth available at the destination (Buhrke et al, Buhrke et al, Col. 1 Lines 65-67 and Col. 2 Lines 1-66, A method is disclosed where a route is chosen based on the bandwidth available at the destination)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the selection method to select a route of traffic based on bandwidth of Buhrke et al because decisions based on bandwidth help avoid congestion in data traffic.

As per claim 29, while Leinwand et al teaches the method as set forth in claim 24 wherein intelligence includes

a connection speed associated with the source (Leinwand et al, Col. 11 Lines 5-24, A route (destination) for a data packet is chosen with the least transit time (connection speed))

Leinwand et al does not teach but Buhrke et al teaches bandwidth available at the destination and (Buhrke et al, Col. 1 Lines 65-67 and Col. 2 Lines 1-66, A method is disclosed where a route is chosen based on the bandwidth available at the destination)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Leinwand et al with the selection method to select a route of traffic based on bandwidth of Buhrke et al because decisions based on bandwidth help avoid congestion in data traffic.

Conclusion

6. Prior arts made of record, not relied upon:

US 2003/0086422 A1 to Klinker et al discloses a system and method to provide routing control of information over networks

US 7,200,673 B1 to Augart discloses determining the geographic location of a network device

US 7,139,820 B1 to O'Toole Jr et al discloses methods and apparatus for obtaining location information in relation to a target device

US 6,778,524 B1 to Augart discloses creating a geographic database for network devices

US 6,516,192 B1 to Spaur et al discloses communications channel selection

US 4,939,726 Flammer et al discloses a method for routing packets in a packet communication network

US 2004/0151129 A1 to Kun-Szabo et al discloses a controller for controlling routers

US 7,260,085 B2 to Dobbins et al discloses a system and method for determining a destination for an internet protocol packet

US 7,116,643 B2 to Huang et al discloses a method and system for data in a collection and route discovery communication network

US 5,946,299 to Blonder discloses systems and methods for providing increased server performance in a communications network

US 6,272,150 to Hrastar et al discloses cable modem map display for network management of a cable data delivery system

US 6,266,607 to Meis et al discloses a process for selecting the traffic information transmitted by a traffic information center which concerns a route of a vehicle equipped with a terminal in a road network

US 6,151,631 to Ansell et al discloses territorial determination of remote computer location in a wide area network for conditional delivery of digitized products

US 6,285,748 to Lewis discloses a network traffic controller

US 6,347,078 to Narvaez-Guarnieri et al discloses multiple path routing

US 5,774,668 to Choquier et al discloses a system for online service in which gateway computer uses service which includes loading condition of servers broadcasted by application servers for load balancing

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BORCE DILEVSKI whose telephone number is (571)270-7154. The examiner can normally be reached on M-F 7:30AM - 5:00PM or Flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571)272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BD

/Taghi T. Arani/
Supervisory Patent Examiner, Art Unit 4144